

REMARKS

Examiner Owens is thanked for his thorough evaluation of the present application. Independent Claim 19, has again been amended and in so doing, become clearly distinguishable from Examiners cited prior art.

Referring to the rejection of the Claims based on 35 USC 103, as being unpatentable over Iwasaki (US 5,907,772), in view of Fukase (US 5,656,529) has been addressed. Fukase describes agglomerated metal silicide for only a top surface of a structure, the top surface of item 8, in Fig 4B, certainly not the agglomerated layer 17c, described by applicant in which layer 17c, interfaces and overlays all exposed surfaces of a cylindrical polysilicon structure comprised of horizontal shape 12b and vertical shapes 15b. In addition applicants structure shows the vertical shapes of the cylindrical polysilicon structure, uniformly doped, via in situ doping which inherently results in the desired uniformly doped vertical shapes. The uniformly doped vertical shapes, obtained via in situ doping, is now described in amended Claim 19. Applicant clearly in the specification describes doping of the vertical shapes via an in situ doping procedure, which structurally will allow uniform doping of the vertical shapes to be realized. Iwasaki who does describe vertical shapes, never mentions if these shapes are doped or intrinsic, and more importantly if the critical property of

[not critical]
Pg. 7, line 8
Pg. 8 lines 22-23

uniform doping was obtained. Applicants structure needed a agglomerated metal silicide layer overlying and interfacing all surfaces of a cylindrical shaped polysilicon structure, with the vertical structures comprised with desired uniform doping which only in situ doping will provide, not just a surface of agglomerated metal silicide, as described by Fukase, or not as the vertical structures without uniform doping or overlying agglomerated metal silicide, described by Iwasaki.

Therefore it is felt that applicant's structure, described in amended independent Claim 19, is novel and unique, when compared to Examiner's cited prior art. Applicants use of a combination of features such as a storage node structure comprised with an underlying cylindrical polysilicon shape, completely overlaid by a agglomerated metal silicide layer, covering all exposed surfaces of the underlying cylindrical polysilicon shape, including the vertical shapes of the UNIFORMLY DOPED cylindrical polysilicon shape, is clearly distinguishable, and novel, when compared to Examiner's cited prior art. None of the cited prior art describes these above desirable features. None of the prior art describes the uniformly doped vertical shapes of the cylindrical shaped polysilicon storage node component, therefore no combination of prior arts can be used to describe applicants structure. Applicant has claimed his process in detail. The structure described in Figs. 1 - 10, and in Claims 19 and 21, are both believed to be

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novel and patentable over these various references, because there is not sufficient basis for concluding that the combination of claimed elements would have been obvious to one skilled in the art. We therefore request Examiner Owens to reconsider his rejections of independent Claim 19, and of dependent Claim 21, now referencing amended independent Claim 19, in view of these arguments and the amendments to the Claims.

Allowance of all claims is requested.

Attached hereto is a marked-up version of the changes made to the Claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE"

It is requested that should Examiner Owens not find that the Claims are now Allowable that he call the undersigned attorney at 845-452-5863, to overcome any problems preventing allowance.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE

19. (TWICE AMENDED) A cylindrical shaped, capacitor structure,
featuring a cylindrical storage node structure comprised
of an underlying, uniformly doped, cylindrical
polysilicon shape and an overlying agglomerated metal
5 silicide layer, comprising:

said cylindrical polysilicon shape comprised of a
bottom polysilicon shape located on a first section of a
top surface of an underlying planar, insulator layer, with
said bottom polysilicon shape overlying and contacting a
10 top surface of a plug structure which in turn is located
in an opening in said insulator layer, and with said
cylindrical polysilicon shape comprised of uniformly
doped, vertical polysilicon shapes, located overlying
second sections of said planar, insulator layer, with
15 bottom portions of said vertical polysilicon shapes
butting edges of said bottom polysilicon shape;



said agglomerated metal silicide layer, with a roughened top surface, located on exposed portions of said cylindrical polysilicon shape, featuring agglomerated metal silicide on top surface of said bottom polysilicon shape, and on all surfaces of uniformly doped, said vertical polysilicon shapes, resulting in said cylindrical shape storage node structure comprised of said agglomerated metal silicide layer on said cylindrical polysilicon shape;

a capacitor dielectric layer located on the exposed surfaces of said cylindrical shape storage node structure; and

an upper electrode, covering said capacitor dielectric layer.

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